Adult Marijuana and Tobacco Indicators in 2017

Behavioral Risk Factor Surveillance System

Washington State Department of Health

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Contents

Overview

The Behavioral Risk Factor Surveillance System (BRFSS) is an annual survey that measures changes in the health of the Washington State adult population.[1] The BRFSS is supported by the Centers for Disease Control and Prevention (CDC) and is the longest continuously running phone survey in the world. Each year, a random selection of phone numbers that are likely to be Washington State residents is contacted and invited to complete the survey over the phone. The results are then weighted to represent the entire adult population of Washington State.

In 2017, the Washington State BRFSS included several questions related to marijuana and tobacco use. "Core" questions are usually asked every year and are required by CDC to be asked in every state. In 2017, these included questions about currently smoking cigarettes, attempting to quit in the past year among current smokers, time since last cigarette among former smokers, currently using smokeless tobacco and, new to the core as of 2016, currently using e-cigarettes. The state added questions to the survey as well. These included questions about housing type and, for those who live in multi-unit housing, whether they had been exposed to tobacco smoke that entered their unit from outside or from another unit in the same building. The state also added questions about marijuana use, including the age at which adults first used marijuana, use of marijuana in the past 30 days, mode of marijuana use in the past 30 days (smoking, eating, drinking, vaporizing, dabbing or other), use of medical marijuana, adverse outcomes due to marijuana use, use of marijuana with alcohol and use of marijuana before driving. These are all state-added questions – the core BRFSS survey defined by CDC does not include any marijuana-related questions. Two of these questions, age of first use and use in the past 30 days, have been asked approximately the same way by Washington State since 2011.

This report describes changes in responses to these questions over time if they have been asked similarly in the past (i.e., trends) and describes differences in the responses to these questions between different groups of Washington State adults (i.e., subpopulation estimates). Large differences between subpopulations are commonly referred to as "disparities" – one group may have a disparately higher prevalence of a health risk behavior than another group. Where feasible, subpopulation estimates are evaluated by combining three years of data together (2015-2017) to improve the precision of the estimates. This report is supplemented by an online data dashboard available at: https://www.doh.wa.gov/DataandStatisticalReports/HealthDataVisualization/MarijuanaandTobaccoDashboard.

There was a major national change to the BRFSS methodology between 2010 and 2011. Results prior to 2011 are generally considered to not be comparable to results from 2011 and later. For this reason, this report is limited to estimates from 2011 and later.

Key findings

- The prevalence of being a current cigarette smoker has been declining slowly since 2011.
- The prevalence of smoking and using smokeless tobacco is high among non-Hispanic American Indians and Alaska Natives.
- Non-smokers who live in multiunit housing are often exposed to tobacco smoke that infiltrates their home from outside or other units in the same building.
- Marijuana use has been increasing among Washington State adults since 2011.
- Smoking marijuana is the most common mode of use, but marijuana is also commonly vaped or eaten.
- Driving after using marijuana is common and more prevalent among those who recently binge drank.

[1] Data Source: Washington State Department of Health, Center for Health Statistics, Behavioral Risk Factor Surveillance System, supported in part by the Centers for Disease Control and Prevention, Cooperative Agreement NU58/DP006066-03-00 (2011-2017).

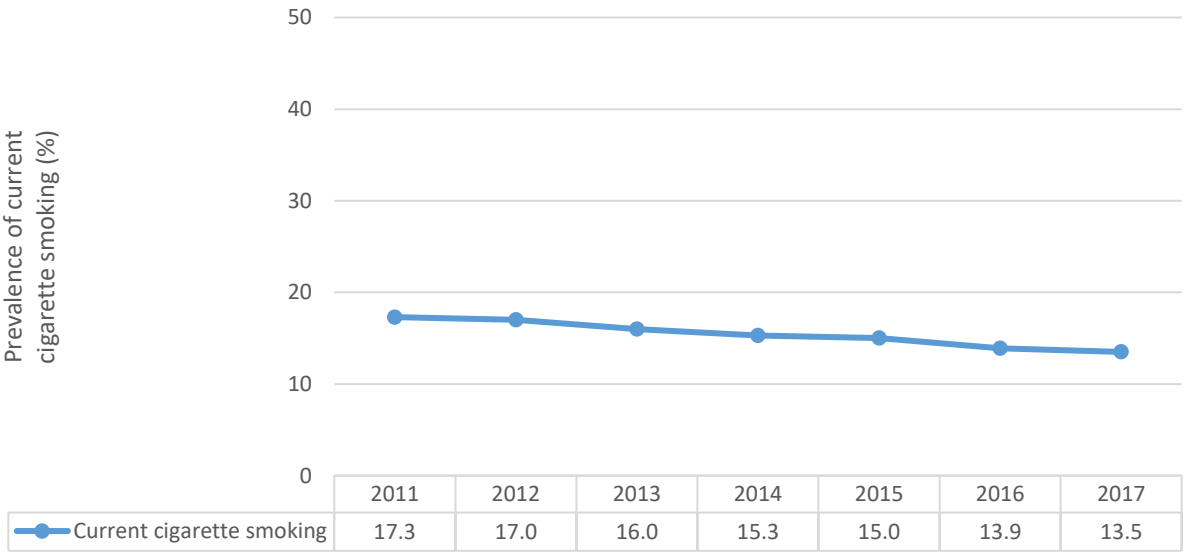
Cigarette smoking

BRFSS participants are asked if they have smoked 100 or more cigarettes (5 packs) in their life. If so, they are asked if they now smoke cigarettes every day, some days or not at all. Respondents who report smoking every day or on some days are categorized as "current smokers." In 2017, the prevalence of being a current smoker among Washington State adults age 18 and older was 13.5 percent (95% CI: 12.7-14.3%).[2]

Trends

Between 2011 and 2017, the prevalence of current smoking among Washington State adults age 18 and older declined by about 0.7 percentage points each year.

Figure 1. Prevalence of current cigarette smoking, Washington State BRFSS, 2011-2017

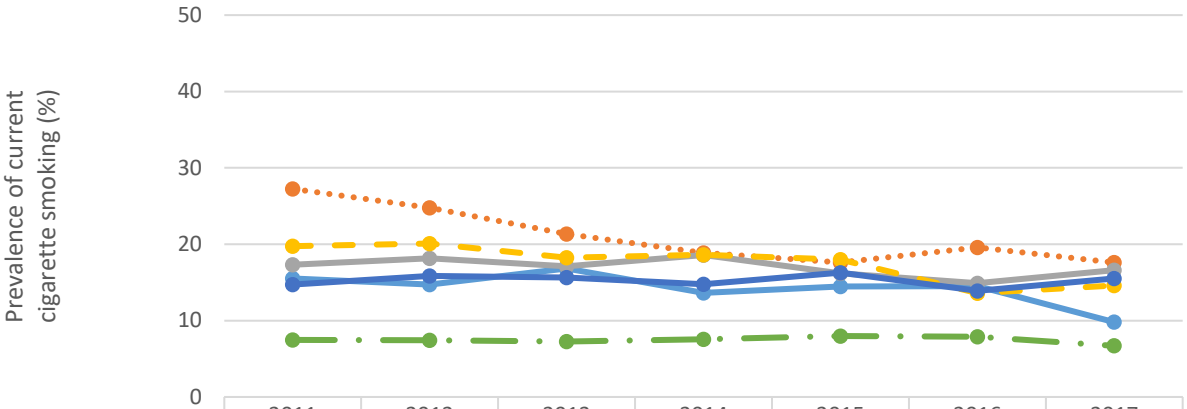


	2011	2012	2013	2014	2015	2016	2017
Current cigarette smoking	17.3	17.0	16.0	15.3	15.0	13.9	13.5

Between 2011 and 2017, the prevalence of current smoking among adults age 25 to 34 declined by about 1.5 percentage points each year and by 1.0 percentage points each year among adults age 45-54. There were no significant increasing or decreasing linear trends among other age groups.

[2] "CI" is short for 95% confidence interval. If the survey were repeated 100 times, the estimate in question would fall within the 95% confidence interval about 95 times.

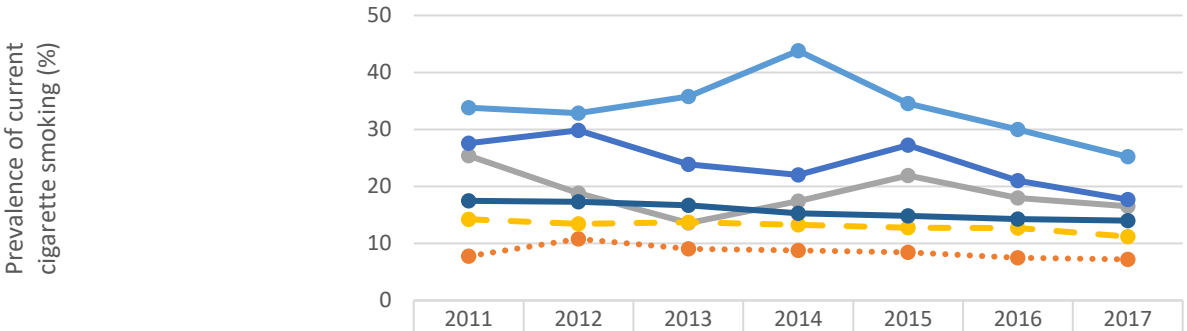
Figure 2. Prevalence of current cigarette smoking by age group, Washington State BRFSS, 2011-2017



	2011	2012	2013	2014	2015	2016	2017
18 to 24	15.5	14.7	16.8	13.6	14.4	14.5	9.8
25 to 34	27.2	24.8	21.3	18.9	17.6	19.6	17.6
35 to 44	17.3	18.2	17.1	18.6	16.2	14.9	16.6
45 to 54	19.8	20.1	18.2	18.6	18.0	13.6	14.6
55 to 64	14.7	15.9	15.7	14.8	16.3	13.9	15.5
65 and older	7.5	7.4	7.3	7.5	8.0	7.9	6.7

Between 2011 and 2017 the prevalence of current smoking among Hispanic adults declined by about 0.4 percentage points each year, by 1.6 percentage points per year among non-Hispanic multiracial adults and by about 0.7 percentage points per year among non-Hispanic white adults. There were no significant increasing or decreasing linear trends among other race/ethnicity groups. Annual Native Hawaiian or Other Pacific Islander rates suffered from low numbers and are suppressed in Figure 3.

Figure 3. Prevalence of current cigarette smoking by race and Hispanic ethnicity group, Washington State BRFSS, 2011-2017



	2011	2012	2013	2014	2015	2016	2017
American Indian or Alaskan Native	33.8	32.8	35.8	43.8	34.6	30.0	25.2
Asian	7.8	10.8	9.1	8.8	8.4	7.5	7.2
Black or African American	25.4	18.8	13.6	17.4	21.9	18.0	16.5
Hispanic	14.2	13.4	13.7	13.3	12.8	12.7	11.2
Multiracial	27.6	29.8	23.9	22.0	27.2	21.0	17.7
Native Hawaiian or other Pacific Islander							
White	17.5	17.3	16.7	15.3	14.8	14.3	14.0

Disparities

Disparities are assessed by comparing 3-year estimates (2015-2017), all of which are available in the companion data dashboard. The prevalence of current cigarette smoking varies significantly by a variety of demographic characteristics including sex, age group, race/ethnicity, annual household income, level of education, health status, sexual orientation, marijuana use and binge drinking status. Some of the highest prevalence rates of smoking are among American Indians/Alaska Natives (30.3%, 95% CI: 25.0-35.6%), those with annual household incomes less than $35,000 (21.9%, 95% CI: 20.8-23.0%), those with a high school diploma/GED or did not graduate high school (22.5%, 95% CI: 21.4-23.6%), those reporting 14 or more days of poor mental health in the past 30 days (27.3%, 95% CI: 25.4-29.1%) and those who binge drank (26.4%, 95% CI: 24.8-28.0%) or used marijuana (33.4%, 95% CI: 31.5-35.3%) in the past 30 days.

Smokeless tobacco use

BRFSS participants are asked if they currently use smokeless tobacco, snuff or snus every day, some days or not at all. Respondents who report using smokeless tobacco every day or on some days are categorized as "current smokeless tobacco users." In 2017, the prevalence of being a current smokeless tobacco user among Washington State adults age 18 and older was 3.4 percent (95% CI: 2.9-3.8%).

Trends

Between 2011 and 2017 there were no significant increasing or decreasing linear trends in current smokeless tobacco use overall or within specific age groups or race/ethnicity groups.

Disparities

Disparities are assessed by comparing 3-year estimates (2015-2017), all of which are available in the companion data dashboard. The prevalence of current smokeless tobacco use varies primarily by sex – the prevalence of current smokeless tobacco use among males (6.0%, 95% CI: 5.6-6.5%) is more than seven times the prevalence of smokeless tobacco use among females (0.8%, 95% CI: 0.6-1.0%). Smokeless tobacco use also varies significantly by age group, race/ethnicity, level of education and veteran's status. The highest rates of smokeless tobacco use are seen among American Indian or Alaska Natives (6.4%, 95% CI: 3.3-9.5%), those with a high school diploma/GED or did not graduate high school (4.3%, 95% CI: 3.7-4.8%) and veterans (5.5%, 95% CI: 4.6-6.4%), who have a prevalence of smokeless tobacco use nearly twice that of non-veterans.

Current electronic cigarette use

BRFSS participants were asked in 2014 and 2015 about using electronic cigarettes in the past 30 days. In 2014 they were asked, "During the past 30 days, on how many days did you use electronic cigarettes or E-cigarettes such as Ruyan or NJOY?" To keep pace with the evolving electronic cigarette market, the question changed in 2015 to, "During the past 30 days, on how many days did you use electronic cigarettes, also called e-cigarettes or vape pens?" In 2016, CDC added the following question to the core survey: "Do you now use e-cigarettes or other electronic "vaping" products every day, some days, or not at all?" The CDC question was asked again in 2017. These results are limited to 2017 due to the change in question language. In 2017, the prevalence of electronic cigarette use among Washington State adults age 18 and older was 4.2 percent (95% CI: 3.7-4.8%).

Disparities

Among others, the prevalence of having used an electronic cigarette in the past 30 days in 2017varies by sex, age group, annual household income, level of education, mental health status and cigarette smoking status. The prevalence of electronic cigarette use among current cigarette smokers (14.9%, 95% CI: 12.3-17.5%) is nearly six times that of never and former smokers (2.6%, 95% CI: 2.1-3.0%). Conversely, about half (47.6%, 95% CI: 41.4-53.8%) of adult electronic cigarette users also smoked cigarettes in 2017. Some of the highest prevalence rates of electronic cigarette use are

among young adults (age 18 to 24: 9.2%, 95% CI: 6.8-11.6%), adults reporting 14 or more days of poor mental health in the past 30 days (12.0%, 95% CI: 9.6-14.4%) and those identifying as gay, lesbian or bisexual (10.3%, 95% CI: 6.6-14.0%).

Trying to quit smoking

BRFSS participants who are current smokers are asked if they have stopped smoking for one or more days in the past 12 months because they were trying to quit smoking. Respondents who stopped smoking for one or more days because they were trying to quit are categorized as having made a quit attempt in the past 12 months. In 2017, the prevalence of having tried to quit smoking among current smokers in Washington State was 59.5 percent (95% CI: 56.3-62.7%).

Trends

Between 2011 and 2017, there was no significant increasing or decreasing linear trends in the prevalence of having made a quit attempt in the past year among Washington State smokers overall, within specific age groups or within race/ethnicity groups.

Disparities

Disparities are assessed by comparing 3-year estimates (2015-2017), all of which are available in the companion data dashboard. The prevalence of making a quit attempt does vary significantly by age group, where the highest rate of having made a quit attempt in the past year is among smokers age 18-24 (66.6%, 95% CI: 60.3-72.8%). The rate also varies by race and ethnicity, where the highest rate is among Black or African American smokers (72.2%, 95% CI: 63.7-80.7%) and the lowest rate of having made a quit attempt is among American Indian or Alaska Native smokers (54.7%, 95% CI: 43.9-65.5%).

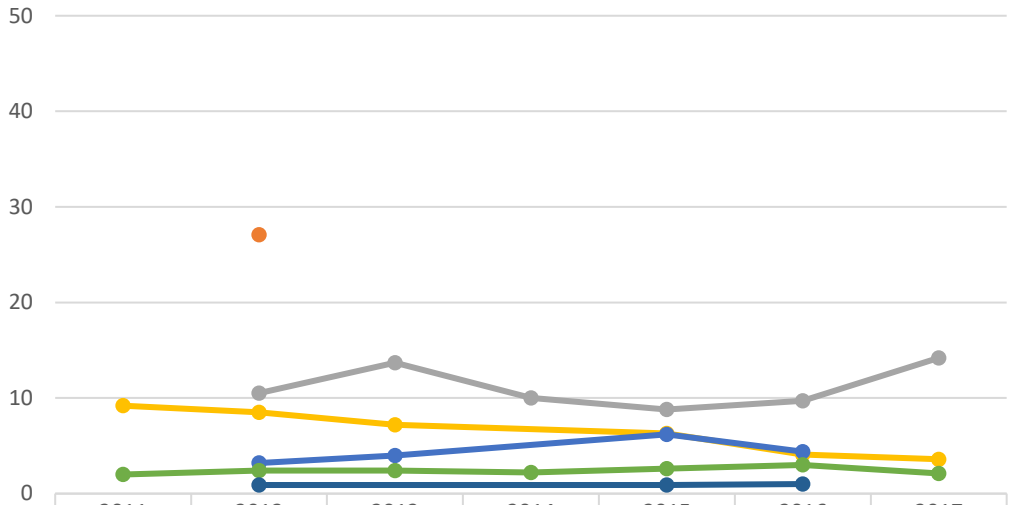
Successful smoking cessation

The BRFSS asks adults who have smoked 100 or more cigarettes in their life, but do not currently smoke, how long ago they had their last cigarette. Responses range from less than one month ago to ten or more years ago. Quitting smoking is hard and smokers who have quit may relapse, but this becomes less likely with time. So, to identify recent successful cessation, we report the prevalence of former smokers having had their last cigarette 6 to 12 months before they were surveyed. These individuals may relapse, but it is helpful to have an indicator of the rate at which smokers are successfully quitting. In 2017, 4.0 percent (95% CI: 3.1-4.9%) of former smokers had their last cigarette 6-12 months ago.

Trends

Between 2011 and 2017, there was no significant increasing or decreasing trends in the prevalence of former smokers having had their last cigarette 6 to 12 months before they were surveyed overall, within specific age groups or race/ethnicity groups with the exception those age 35-44. Among those age 35-44, the prevalence of recent successful cessation decreased by about 0.9 percentage points per year.

Figure 4. Prevalence of recent successful cessation among former smokers by age group, Washington State BRFSS, 2011-2017



	2011	2012	2013	2014	2015	2016	2017
Age 18 to 24		27.1					
Age 25 to 34		10.5	13.7	10.0	8.8	9.7	14.2
Age 35 to 44	9.2	8.5	7.2		6.3	4.1	3.6
Age 45 to 54		3.2	4.0		6.2	4.4	
Age 55 to 64	2.0	2.4	2.4	2.2	2.6	3.0	2.1
Age 65 or older		0.9			0.9	1.0	

Disparities

Disparities are assessed by comparing 3-year estimates (2015-2017), all of which are available in the companion data dashboard. The prevalence of recent successful cessation among former smokers varies by age group, whether the person has a personal doctor and by sexual orientation. Some of the highest rates were seen among those age 18-24 (15.5%, 95% CI: 9.2-21.8%) and adults who identify as lesbian, gay or bisexual (8.7%, 95% CI: 4.7-12.8%)

Secondhand smoke infiltration in multiunit housing

In 2017 BRFSS respondents who did not currently smoke cigarettes were asked, “How often does tobacco smoke enter your living space from somewhere else in or around the building?” Possible responses included “Every day”, “A few times a week”, “A few times a month”, “Once a month or less” and “Never.” Respondents were separately classified by housing type: if they lived in a building with two or more apartments or living units, respondents were categorized as living in multiunit housing. In 2017, the prevalence of having smoke enter their living space from somewhere else in or around the building among non-smoking adults who live in multiunit housing was 29.1 percent (95% CI: 25.9-32.4%). In other words, nearly 30 percent of non-smoking adults who live in multiunit housing had someone else’s tobacco smoke infiltrate into their home in 2017.

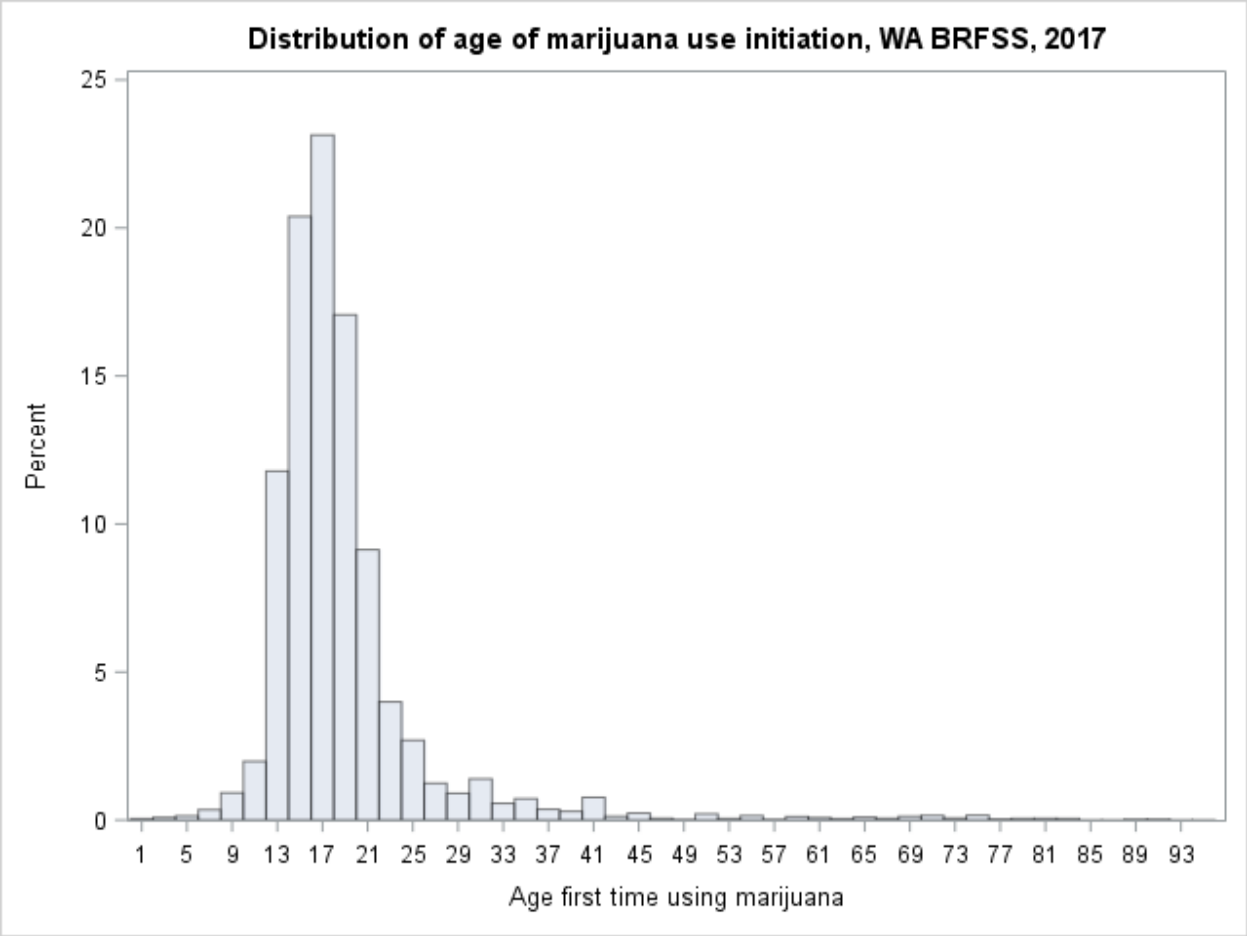
Disparities

This question has only ever been asked in 2017, so, disparities are assessed using a single year of data. In 2017, the prevalence of secondhand smoke infiltration among non-smoking Washington State adults who live in multiunit housing varied by age group, mental health status and veteran status, among others. Some of the highest rates were seen among adults age 18 to 24 (36.1%, 95% CI: 27.6-44.6%) and those with 14 or more days of poor mental health in the past month (44.2%, 95% CI: 35.6-52.7%).

Ever used marijuana

BRFSS participants are asked how old they were the first time they used marijuana. In addition to supplying an age distribution of Washington State adults' first encounter with marijuana, this question can also be used to describe the prevalence of having ever used marijuana. Respondents who provide an age or don't know or are not sure how old they were when they first used marijuana are coded as having ever used marijuana. The wording of this question changed in 2014, switching from asking about the age at which respondents first "smoked" marijuana to the age at which they first "used" marijuana. In 2017, the prevalence of having ever used marijuana among Washington State adults was 55.7 percent (95% CI: 54.5-56.9%). The mean age at which Washington State adults first used marijuana is 18, with an interquartile range spanning age 15 to 19 (i.e., 50% of those who have ever used marijuana first used it between the ages of 15 and 19).

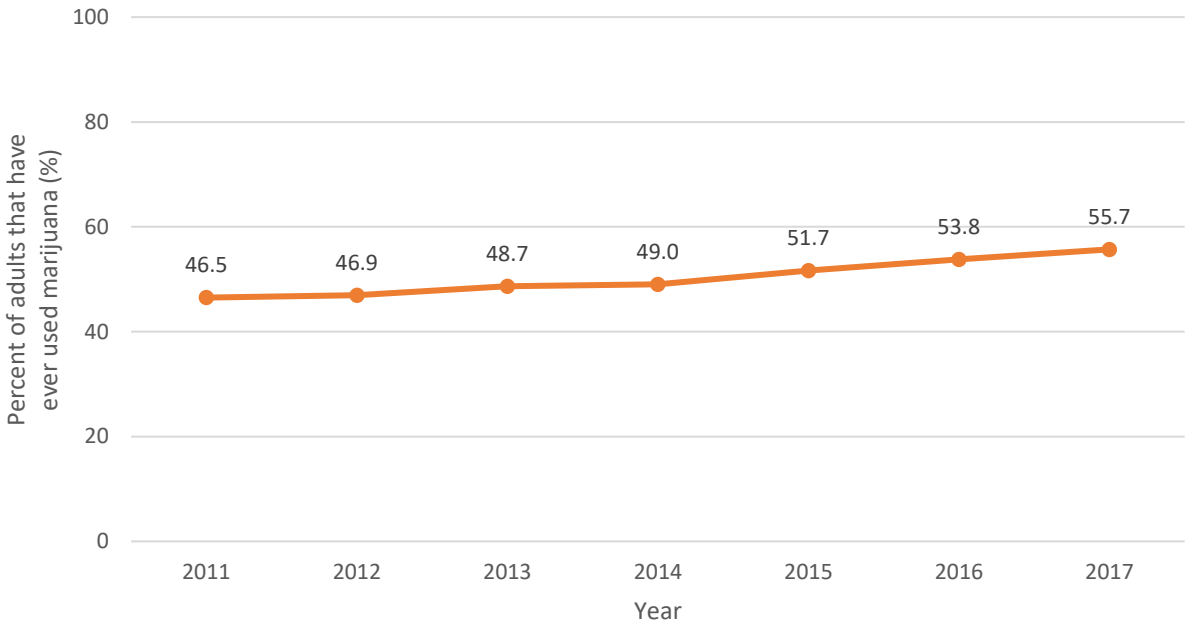
Figure 5. Distribution of age of first using marijuana, WA BRFSS, 2017



Trends

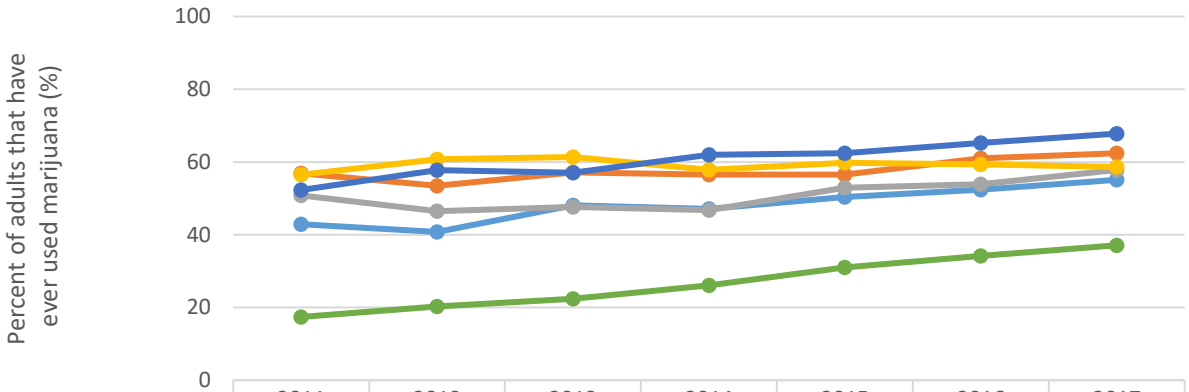
Between 2011 and 2017, the prevalence of having ever used marijuana among Washington State adults increased by about 1.6 percentage points each year.

Figure 6. Prevalence of having ever used marijuana, Washington State BRFSS, 2011-2017



Between 2011 and 2017, the prevalence of having ever used marijuana increased by 2.2 percentage points per year among adults age 18 to 24, by 1.1 percentage points per year among adults age 25 to 34, by 2.4 percentage points per year among adults age 55 to 64 and by 3.4 percentage points per year among adults age 65 or older.

Figure 7. Prevalence of having ever used marijuana by age group, Washington State BRFSS, 2011-2017

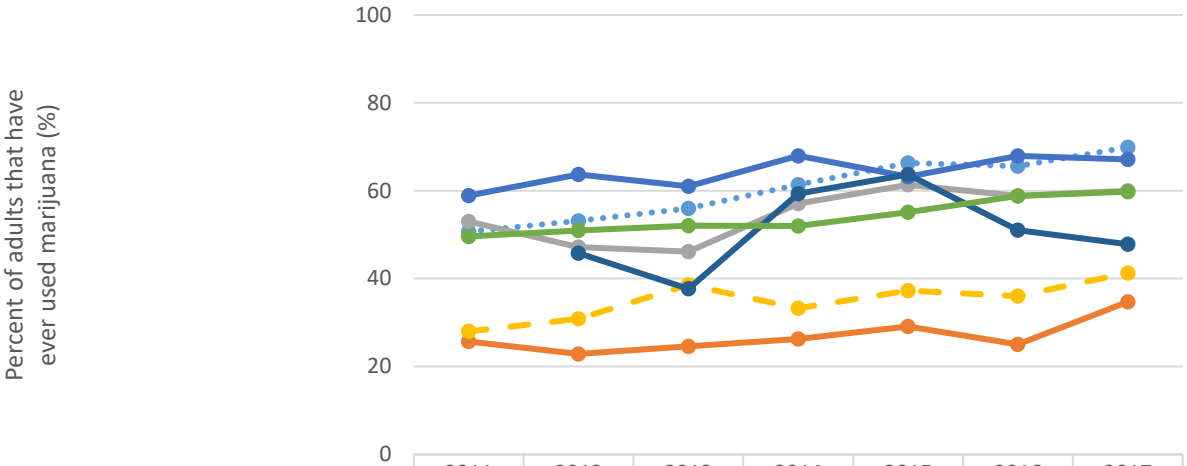


	2011	2012	2013	2014	2015	2016	2017
Age 18 to 24	42.9	40.8	48.1	47.1	50.4	52.4	55.1
Age 25 to 34	56.9	53.5	57.1	56.5	56.5	61.0	62.4
Age 35 to 44	50.8	46.5	47.6	46.7	52.9	53.9	57.8
Age 45 to 54	56.5	60.7	61.4	57.8	59.8	59.3	58.6
Age 55 to 64	52.3	57.8	57.1	62.0	62.5	65.2	67.8
Age 65 or older	17.4	20.3	22.4	26.0	31.1	34.2	37.1

Between 2011 and 2017 the prevalence of having ever used marijuana among non-Hispanic White adults increased by about 1.8 percentage point each year, by 1.3 percentage points per year among those who identify as non-Hispanic and

two or more races, by 1.7 percentage points per year among those who identify as Hispanic and by about 3.3 percentage points each year among non-Hispanic American Indian or Alaska Natives. There were no significant increasing or decreasing linear trends among other race/ethnicity groups.

Figure 8. Prevalence of having ever used marijuana by race and Hispanic ethnicity group, Washington State BRFSS, 2011-2017



	2011	2012	2013	2014	2015	2016	2017
American Indian or Alaskan Native	50.7	53.1	55.9	61.4	66.3	65.6	69.9
Asian	25.7	22.9	24.6	26.3	29.1	25.0	34.7
Black or African American	53	47.2	46.1	57.1	61.3	58.8	60.0
Hispanic	28	30.9	38.6	33.2	37.3	36.0	41.3
Multiracial	58.9	63.7	61.0	68.0	63.2	67.9	67.1
Native Hawaiian or other Pacific Islander		45.8	37.7	59.3	63.7	51.0	47.8
White	49.6	50.9	52.0	52.0	55.1	58.8	59.8

Year

Disparities

Between 2015 and 2017, the prevalence of having ever used marijuana varies significantly by a variety of demographic characteristics, including sex, age group, race/ethnicity, mental health status, sexual orientation, cigarette smoking and binge drinking status. Some of the highest prevalence rates of having ever used marijuana are among males (58.4%, 95% CI: 57.4-59.4%), adults age 55 to 64 (65.0%, 95% CI: 63.7-66.3%), those who identify as multiracial (66.1%, 95% CI: 62.2-70.1%), those reporting 14 or more days of poor mental health in the past 30 days (69.0%, 95% CI: 67.1-71.0%), those who identify as lesbian, gay or bisexual (75.1%, 95% CI: 72.0-78.1%), those who binge drank in the past 30 days (81.8%, 95% CI: 80.4-83.3%) and current smokers (81.9%, 95% CI: 80.4-83.3%).

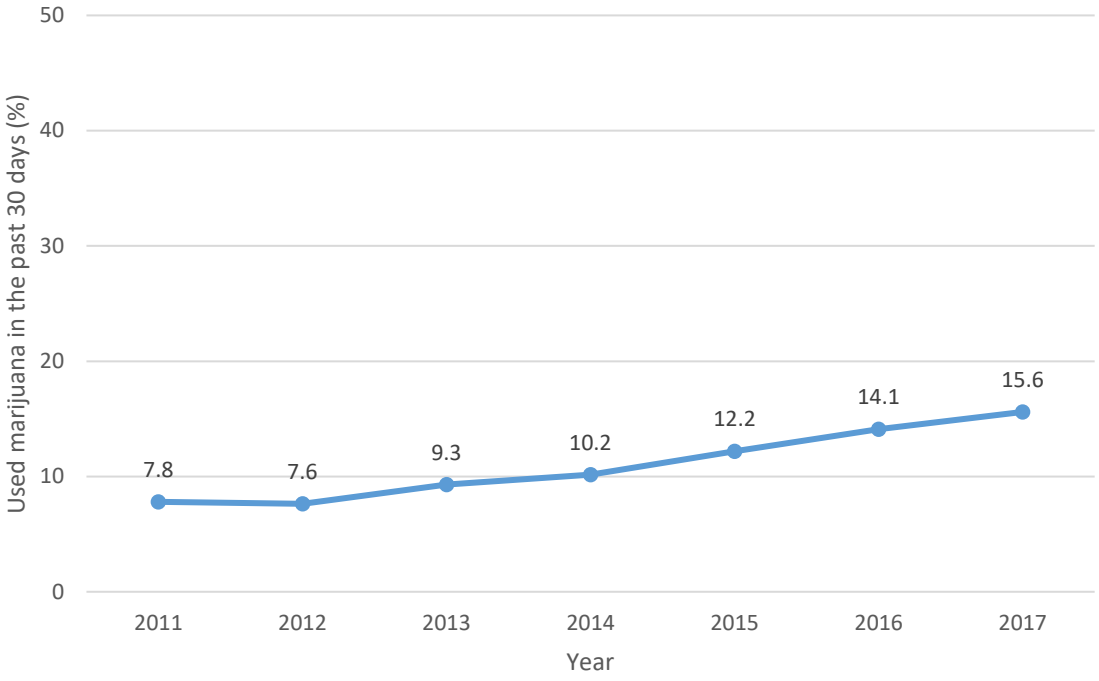
Used marijuana in the past 30 days

If BRFSS participants reported an age or did not know or were not sure at what age they first used marijuana they were asked “During the past 30 days, on how many days did you use marijuana or hashish (grass, hash, or pot)?” Respondents who reported using marijuana on one or more days or did not know or were not sure how many days they used marijuana in the past 30 are categorized as having used marijuana in the past 30 days. In 2017, the prevalence of having used marijuana in the past 30 days among Washington State adults was 15.6 percent (95% CI: 14.7-16.6%).

Trends

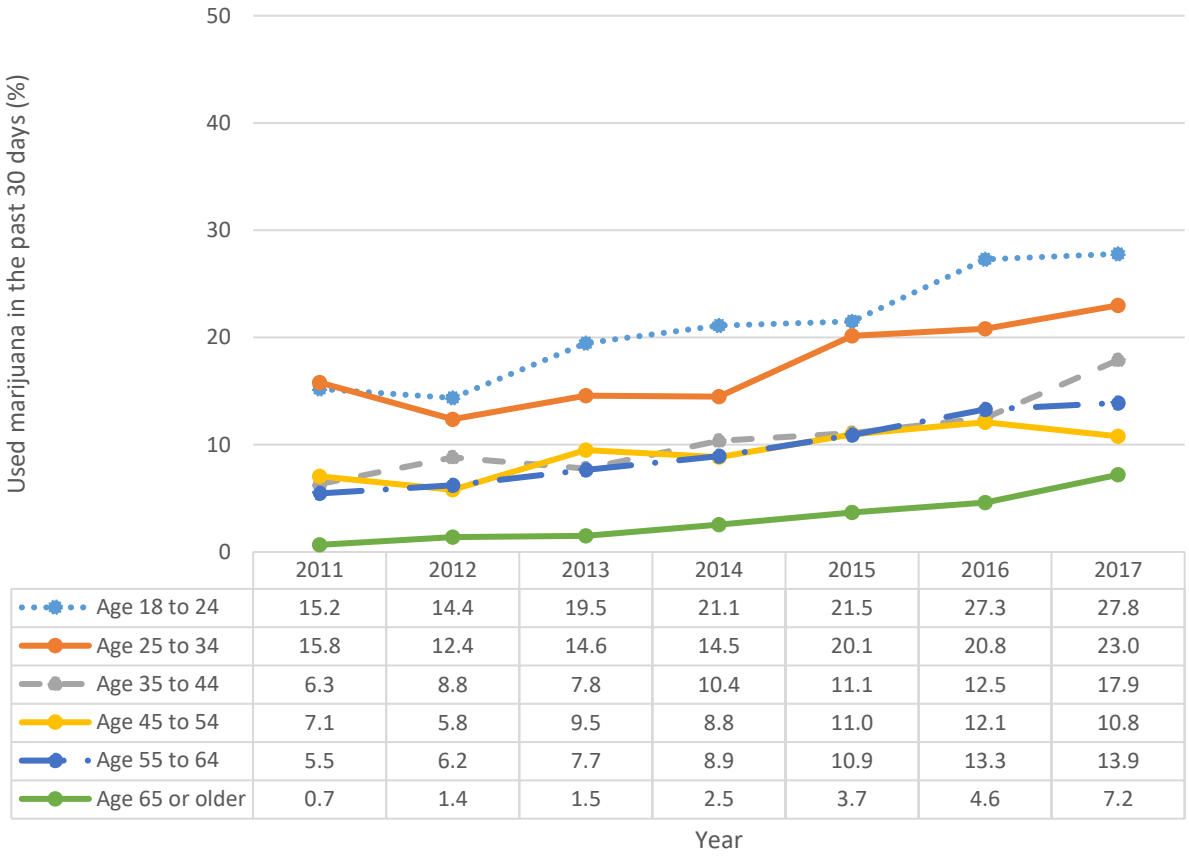
Between 2011 and 2017, the prevalence of having used marijuana on one or more of the past 30 days increased among Washington State adults by about 1.4 percentage points per year.

Figure 9. Prevalence of having used marijuana on one or more of the past 30 days, Washington State BRFSS, 2011-2017



Between 2011 and 2017, the prevalence of having used marijuana on one or more of the past 30 days increased by 2.3 percentage points per year among Washington State adults age 18-24, by 1.6 percentage points per year among adults age 25 to 34 and 35 to 44, by 0.9 percentage points per year among adults age 45 to 54, by 1.5 percentage points per year among adults age 55 to 64 and by 1.0 percentage points pear year among adults age 65 and older.

Figure 10. Prevalence of having used marijuana on one or more of the past 30 days by age group, Washington State BRFSS, 2011-2017

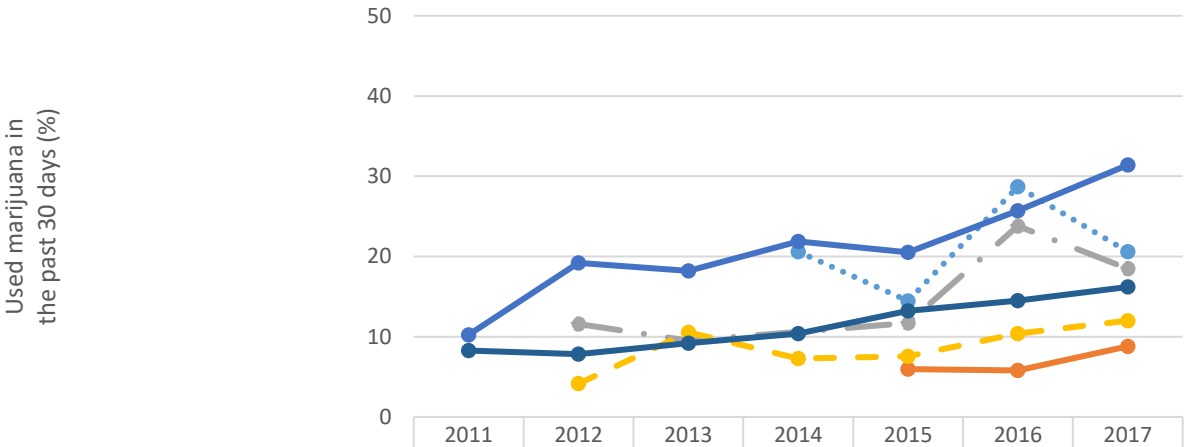


	2011	2012	2013	2014	2015	2016	2017
Age 18 to 24	15.2	14.4	19.5	21.1	21.5	27.3	27.8
Age 25 to 34	15.8	12.4	14.6	14.5	20.1	20.8	23.0
Age 35 to 44	6.3	8.8	7.8	10.4	11.1	12.5	17.9
Age 45 to 54	7.1	5.8	9.5	8.8	11.0	12.1	10.8
Age 55 to 64	5.5	6.2	7.7	8.9	10.9	13.3	13.9
Age 65 or older	0.7	1.4	1.5	2.5	3.7	4.6	7.2

Year

Between 2011 and 2017 the prevalence of having used marijuana in the past 30 days increased by 1.5 percentage points per year among non-Hispanic White adults, by 3.6 percentage points per year among non-Hispanic American Indian or Alaska Native adults, by 0.5 percentage points per year among non-Hispanic Asian adults, by 2.8 percentage points per year among non-Hispanic adults who identify with two or more races, and by 1.3 percentage points among Hispanic adults. There were no other significant increasing or decreasing linear trends among other race/ethnicity groups.

Figure 11. Prevalence of having used marijuana on one or more of the past 30 days by race/ethnic group, Washington State BRFSS, 2011-2017



	2011	2012	2013	2014	2015	2016	2017
American Indian or Alaskan Native				20.6	14.5	28.7	20.6
Asian					6.0	5.8	8.8
Black or African American		11.6	9.5		11.7	23.8	18.5
Hispanic		4.2	10.5	7.3	7.6	10.4	12.0
Multiracial	10.2	19.2	18.2	21.9	20.5	25.7	31.4
Native Hawaiian or other Pacific Islander							
White	8.3	7.8	9.2	10.4	13.2	14.5	16.2

Year

Disparities

Between 2015 and 2017, the prevalence of using marijuana in the past 30 days varies significantly by subpopulations including gender, age group, race/ethnicity, annual household income, level of education, mental health status, veteran's status, sexual orientation and smoking and binge drinking status. The highest rates of past 30-day marijuana use are seen among males (16.3%, 95% CI: 15.5-17.1%), younger adults (age 18-24: 25.4%, 95% CI: 23.1-27.6%), those who identify as multiracial (25.8%, 95% CI: 21.9-29.7%), those with annual household incomes less than $25,000 (18.7%, 95% CI: 17.3-20.1%), those reporting 14 or more days of poor mental health in the past 30 days (26.6%, 95% CI: 24.6-28.5%), those who identify as lesbian, gay or bisexual (24.9%, 95% CI: 31.6-38.2%), those who smoke cigarettes (33.1%, 95% CI: 31.2-35.0%) and those who binge drank in the past 30 days (32.0%, 95% CI: 30.2-33.7%).

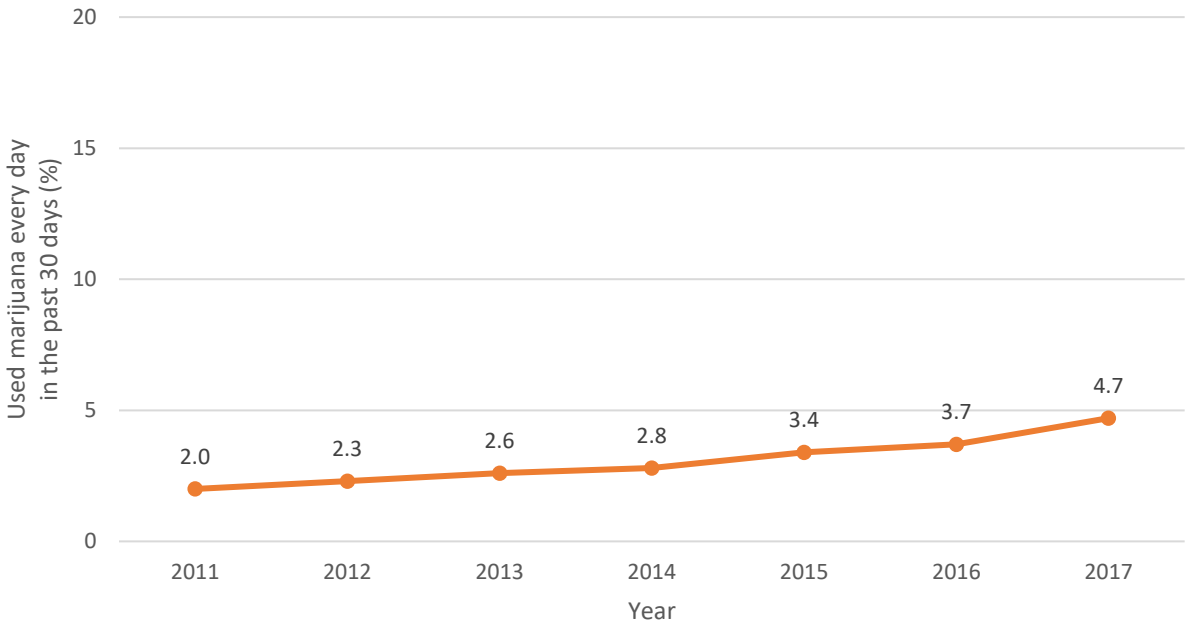
Used marijuana every day in the past 30 days

The same questions used to estimate any marijuana use in the past 30 days is used to estimate the percent of adults who used marijuana every day in the past 30 days by limiting the numerator to adults who report using marijuana on 30 of the past 30 days. In 2017, the prevalence of using marijuana on every day in the past 30 days among Washington State adults was 4.7 percent (95% CI: 4.1-5.2%).

Trends

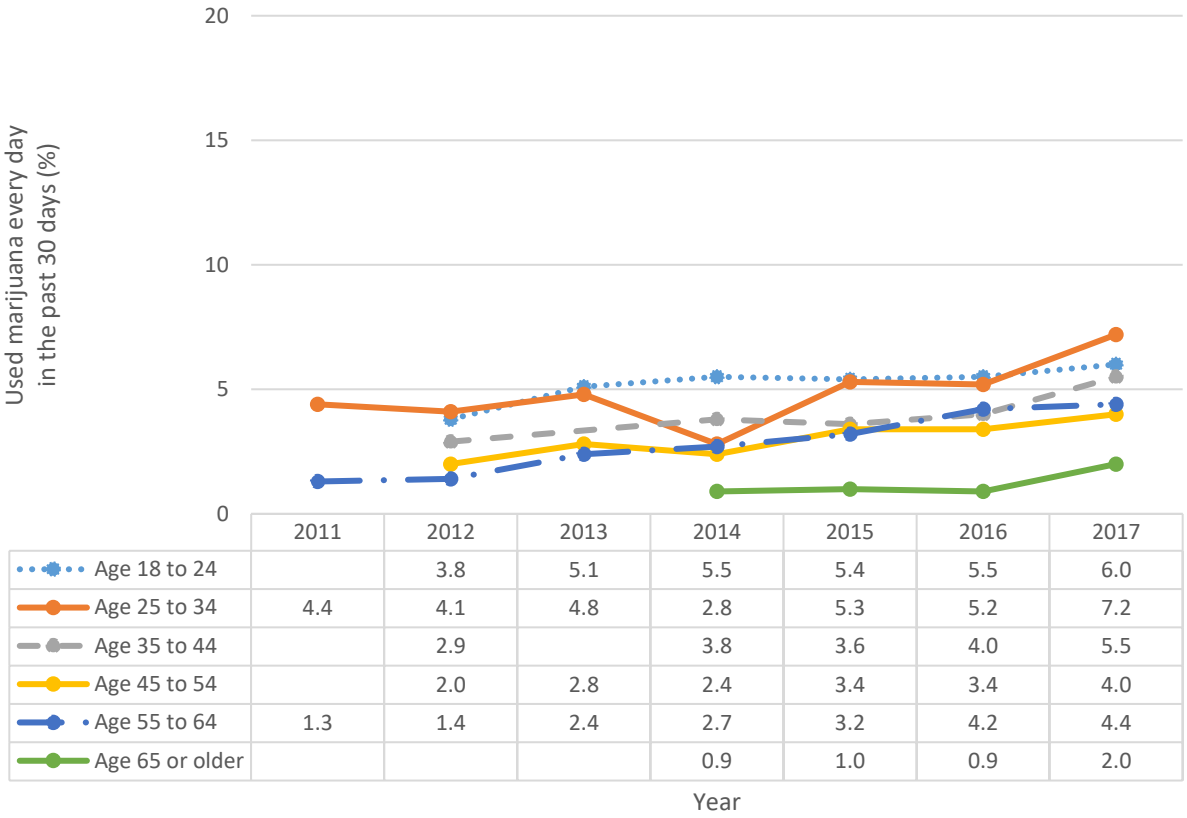
Between 2011 and 2017, the prevalence of having used marijuana every day in the past 30 days increased among Washington State adults by about 0.4 percentage points per year, from 2.0 percent (95% CI: 1.4-2.5%) in 2011 to 4.7 percent (95% CI: 4.1-5.2%) in 2017.

Figure 12. Prevalence of having used marijuana on every day of the past 30 days, Washington State BRFSS, 2011-2017



Between 2011 and 2017, there was a significant linear increase of 0.3 percentage points per year in the prevalence of having used marijuana every day on the past 30 days among adults age 18-24, 0.6 percentage points per year among adults age 35 to 44, 0.4 percentage points per year among adults age 45 to 54, 0.6 percentage points per year among adults age 55-64, and 0.3 percentage points per year among adults age 65 and older. There was no significant linear trend among adults age 25 to 34.

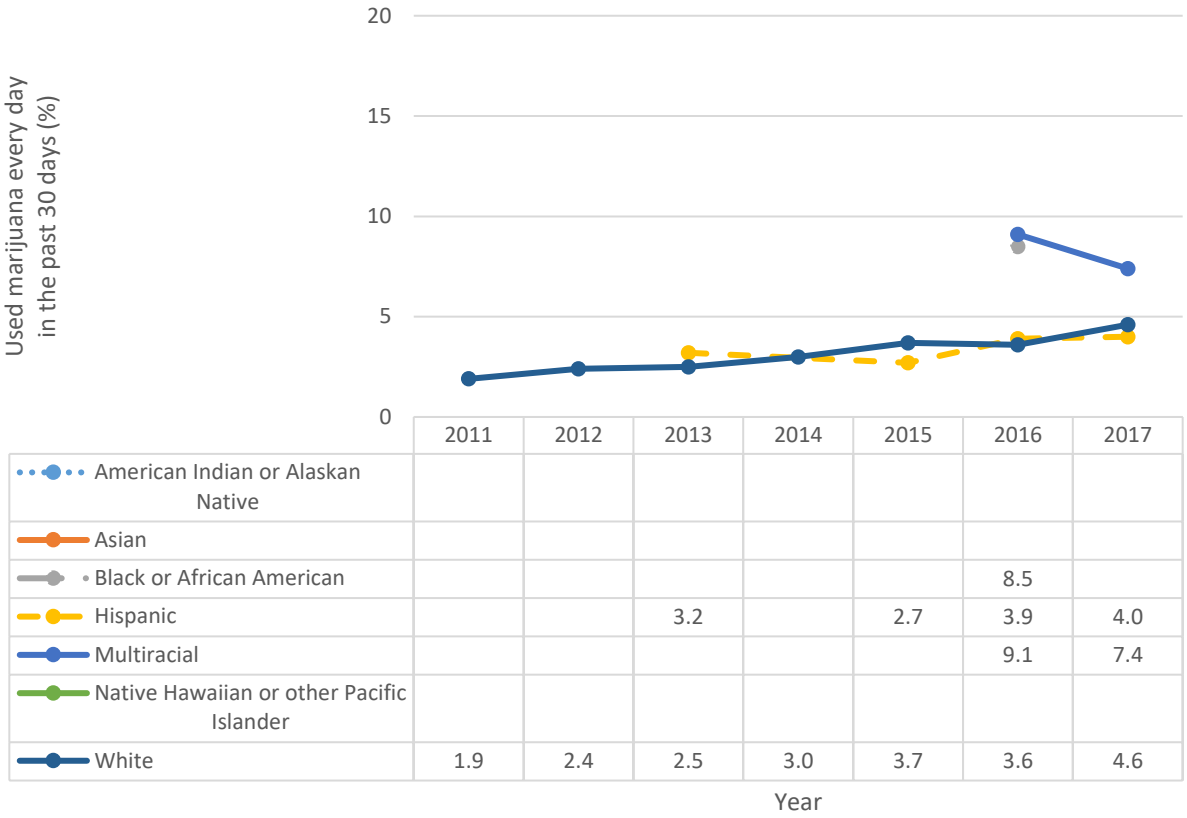
Figure 13. Prevalence of having used marijuana every day in the past 30 days by age group, Washington State BRFSS, 2011-2017



	2011	2012	2013	2014	2015	2016	2017
Age 18 to 24		3.8	5.1	5.5	5.4	5.5	6.0
Age 25 to 34	4.4	4.1	4.8	2.8	5.3	5.2	7.2
Age 35 to 44		2.9		3.8	3.6	4.0	5.5
Age 45 to 54		2.0	2.8	2.4	3.4	3.4	4.0
Age 55 to 64	1.3	1.4	2.4	2.7	3.2	4.2	4.4
Age 65 or older				0.9	1.0	0.9	2.0

The prevalence of having used marijuana every day in the past 30 days increased by about 0.4 percentage points each year among non-Hispanic White adults and Hispanic adults between 2011 and 2017. There were no other significant increasing or decreasing linear trends in other race/ethnic groups. Many of the annual estimates in figure 14 are suppressed due to high relative standard error.

Figure 14. Prevalence of having used marijuana every day in the past 30 days by race/ethnic group, Washington State BRFSS, 2011-2017



	2011	2012	2013	2014	2015	2016	2017
American Indian or Alaskan Native							
Asian							
Black or African American						8.5	
Hispanic			3.2		2.7	3.9	4.0
Multiracial						9.1	7.4
Native Hawaiian or other Pacific Islander							
White	1.9	2.4	2.5	3.0	3.7	3.6	4.6

Disparities

The prevalence of having used marijuana every day in the past 30 days varies by sex, age group, race/ethnicity, annual household income, level of education, mental health status, sexual orientation, cigarette smoking and binge drinking status. Some of the highest rates of using marijuana every day in the past 30 days were seen among those reporting 14 or more days of poor mental health in the past 30 days (10.2%, 95% CI: 8.9-11.6%), adults who identify with more than one race (7.6%, 95% CI: 5.1-10.0%), current smokers (12.4%, 95% CI: 11.0-13.8%) and those identifying as gay, lesbian or bisexual (9.3%, 95% CI: 7.3-11.4%).

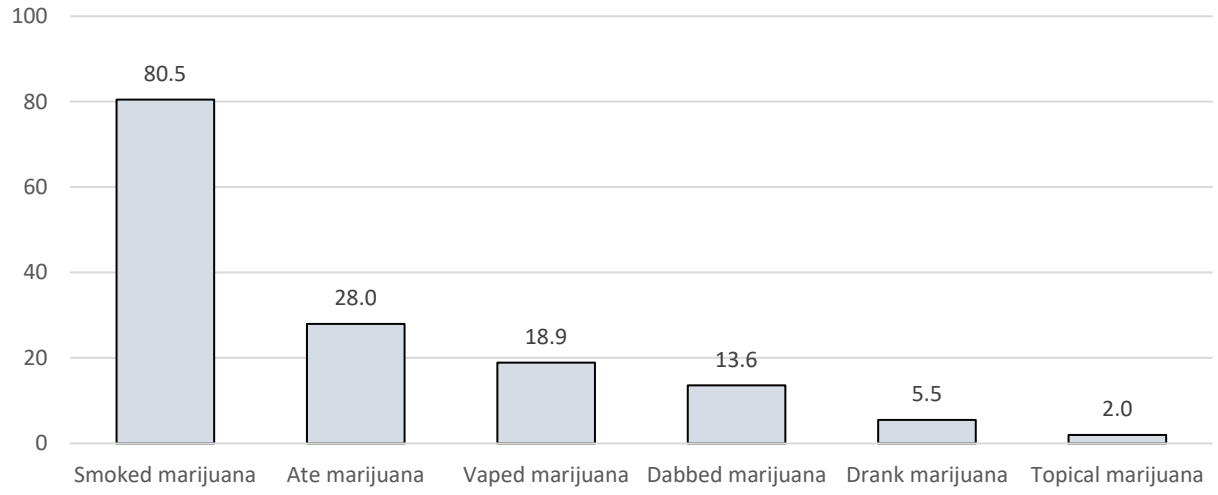
Mode of marijuana use

In 2015, 2016 and 2017, BRFSS participants who had used marijuana in the past 30 days were asked “During the past 30 days, how did you use marijuana? Please tell me all that apply.” Multiple response options could be selected and included the following...

- Smoke it [if needed: (in a joint, bong, pipe, or blunt)]
- Eat it [if needed: (in brownies, cakes, cookies, or candy)]
- Drink it [if needed: (tea, cola, or alcohol)]
- Vaporize it [if needed: (e-cigarette-like vaporizer)]
- Dab hash oil [if needed: (that is, using butane hash oil or concentrates)]
- Or use it some other way (specify):_____
- Don’t know/Not sure
- Refused

Respondents who did not know, were not sure or refused the question are excluded from the analysis. Because multiple responses could be selected, respondents who selected more than one mode of use are represented more than once in the below figure and the estimates will sum to more than 100 percent. In 2017, the prevalence of smoking marijuana in the past 30 days among adults who had used marijuana in the past 30 days was 80.5 percent (95% CI: 78.1-83.0%). The prevalence of eating or drinking marijuana infused products among this group was 29.1 percent (not shown in figure 15, 95% CI: 26.2-32.1%). The prevalence of "vaping" marijuana among this group was 18.9 percent (95% CI: 16.3-21.4%). The prevalence of "dabbing" hash oil among this group was 13.6 percent (95% CI: 11.2-16.0%). About two percent (95% CI: 1.1-2.8%) applied marijuana-infused topical ointments.

Figure 15. Prevalence of mode of marijuana use among adults who used marijuana on one or more of the past 30 days, Washington State BRFSS, 2017



Disparities

For the first time subpopulation estimates of mode of marijuana use can leverage three years of data (2015-2017). The prevalence of ***smoking marijuana*** is higher among past 30-day marijuana users who are younger adults (age 18-24: 90.0%, 95% CI: 87.1-92.9% vs. age 65+: 70.7%, 95% CI: 66.6-74.9%), adults with lower annual household income (less than $25,000: 90.1%, 95% CI: 87.8-92.3%% vs. $75,000 or more: 73.8%, 95% CI: 70.8-76.9%) and those who smoke cigarettes (current smokers: 94.3%, 95% CI: 92.9-95.7% vs. never or former smokers: 77.9%, 95% CI: 76.1-79.8%). The prevalence of ***eating or drinking marijuana*** was higher among past 30-day marijuana users who have more education (34.8%, 95% CI: 31.8-37.9%), and those who are have never or formerly smoked cigarettes (32.3%, 95% CI: 30.1-34.5%) compared to current smokers (23.1%, 95% CI: 18.0-28.2%). The prevalence of ***vaping marijuana*** was higher among men (19.9%, 95% CI: 17.8-22.0%), adults reporting higher annual household income ($75,000 or more: 23.2%, 95% CI: 20.3-26.2%), and never or former smokers (19.5%, 95% CI: 17.7-21.4%). ***Dabbing marijuana*** was more common among men (17.0%, 95% CI: 14.9-19.1%), younger adults (age 18-24: 26.1%, 95% CI: 21.6-30.7%), those with 14 or more days of poor mental health in the past 30 days (19.5%, 95% CI: 15.9-23.2%), those who do not have health insurance (21.7% 95% CI: 15.9-27.5%) and those who have asthma (19.5%, 95% CI: 15.0-24.0%).

Medical marijuana use

Between 2013 and 2015, BRFSS respondents who reported a marijuana use age of initiation (or not knowing or being sure when they first used marijuana) were asked, "During the past 30 days, on how many days did you use medical marijuana as recommended by a doctor or other health care provider for treatment of a medical condition?" Those who reported a number of days or did not know or were not sure how many days they used medical marijuana were coded as having used medical marijuana in the past 30 days. In 2016 and 2017, the question was revised to, "During the past

30 days, did you use medical marijuana as recommended by a doctor or other health care provider for treatment of a medical condition?" and the response options were changed to "yes" or "no." Respondents who said they had never used marijuana to the age of initiation question and those who responded "no" to the medical marijuana question were set to "no" and those who said "yes" were set to "yes." Respondents who did not know or refused the medical marijuana question were excluded. Although asked differently, we treat these variables, as coded, as comparable and combine multiple years of results to facilitate disparities analysis. The 2013-2015 estimate of medical marijuana use is 3.0 percent while the 2016 and 2017 estimate of medical marijuana use is 2.7 and 2.9 percent, respectively. From 2015-2017, the prevalence of having used medical marijuana in the past 30 days was 2.9 percent (95% CI: 2.6-3.1%).

Disparities

Between 2015 and 2017, the prevalence of having used medical marijuana in the past 30 days varied by age group, race/ethnicity, annual household income, level of education, and physical and mental health status, among others. Some of the highest prevalence rates of having used medical marijuana in the past 30 days were seen among adults age 55-64 (3.7%, 95% CI: 3.2-4.2%), adults who identify as multiracial (4.8%, 95% CI: 3.0-6.6%), adults with an annual household income less than $25,000 (5.4%, 95% CI: 4.7-6.2%), those reporting 14 or more days of poor physical health in the past 30 days (8.6%, 95% CI: 7.5-9.7%) and those reporting health 14 or more days of poor mental health in the past 30 days (8.0%, 95% CI: 6.9-9.1%).

Used marijuana before driving

Between 2014 and 2017, BRFSS respondents who reported being licensed drivers and using marijuana or medical marijuana in the past 30 days were asked, "Thinking about the last TWELVE months, did you ever drive within approximately three hours after using marijuana or hashish?" Respondents who said "yes" were coded as having used marijuana before driving while those who said "no" were coded as having not used marijuana before driving in the past 12 months. Those who did not know or were not sure were excluded from the analysis. In 2017, the prevalence of having driven after using marijuana in the past 12 months among those who had used marijuana in the past 30 days was 30.8 percent (95% CI: 27.5-34.1%).

Disparities

Between 2015 and 2017, the prevalence of having used marijuana before driving in the past 12 months among Washington State adults who used marijuana in the past 30 days varied by gender and cigarette and binge drinking status. Some of the highest prevalence rates of having used marijuana before driving in the past 12 months were seen among males (36.4%, 95% CI: 31.9-41.0%), current smokers (37.3%, 95% CI: 30.8-43.9%) and those who binge drank alcohol in the past 30 days (38.5%, 95% CI: 32.5-44.4%).

Variable definitions

Tobacco and marijuana-related questions and how they are translated into variables are described in the text of this document. Most of the variables used in this report to describe subpopulations in the associated data dashboard are self-evident (e.g., age group 18 to 24 describes adults who report being age 18 to 24 years old) and calculated variables follow standard coding implemented by the CDC for the sake of comparability of results across states and over time. Additional information on how CDC processes BRFSS data, including calculated variable definitions and core questionnaires, is available online at http://www.cdc.gov/brfss. Below are select definitions of variables used in this report that may be less obvious or are not calculated by CDC.

Race/ethnicity: this is the "_RACE" race and ethnicity variable provided by CDC. Any "don't know/not sure" responses and refusals are excluded from the analysis.

- **White only, non-Hispanic**: respondents who reported they are white and not of Hispanic origin.
- **Black only, non-Hispanic**: respondents who reported they are black and not of Hispanic origin.
- **American Indian or Alaskan Native only, Non-Hispanic**: respondents who reported they are American Indian or Alaska Native and not of Hispanic origin.
- **Asian only, non-Hispanic**: respondents who reported they are Asian and not of Hispanic origin.
- **Native Hawaiian or other Pacific Islander only, Non-Hispanic**: respondents who reported they are Native Hawaiian or Pacific Islander and not of Hispanic origin.
- **Other race only, non-Hispanic**: respondents who reported they are of some other race group not listed in the question responses and are not of Hispanic origin.
- **Multiracial, non-Hispanic**: respondents who reported they are of more than one race group and are not of Hispanic origin.
- **Hispanic**: Respondents who reported they are of Hispanic origin, regardless of race.

Disability status: the questions used to classify callers as living with a disability in previous reports were removed in 2017. Alternative questions were added in 2016, but are not available in 2015. Consequently, three-year estimates (2015-2017) by disability status are not available in this report. Disability status will be revisited in the 2018 BRFSS.

Binge drinking status: this is the "_RFBING5" variable provided by CDC. "Don't know/not sure" responses and refusals are excluded from this analysis.

- **Yes**: Respondents who reported they did drink in the past 30 days and had five or more drinks on one or more occasions in the past month.
- **No**: Respondents who reported they did not drink in the past 30 days, or those who reported that they did drink alcohol in the past 30 days but did not report having five or more drinks of alcohol on an occasion.

Sexual orientation: the question assessing sexual orientation on the WA BRFSS changed every year between 2014 and 2016. In 2014, the question read, "Now I'm going to ask you a question about sexual orientation. Do you consider yourself to be... Heterosexual or straight; Homosexual, gay, or lesbian; Bisexual; Other" In 2015, the question was the same, but the response options were changed to, "Lesbian or gay; Straight, that is, not lesbian or gay; Bisexual; Something else". In 2016 and 2017, the question read, "Do you consider yourself to be… ? Straight; Lesbian or gay; Bisexual; Other" For this analysis, respondents who indicated they were gay, lesbian, homosexual or bisexual were coded as "LGB" while respondents who stated they were straight or heterosexual were coded as heterosexual. Respondents who did not know, or identified as "other" or "something else" were excluded from the analysis.

Accountable Communities of Health (ACH Regions): the ACH regions were not finalized until recently, so estimates may not match historical estimates. For this analysis, ACH regions are defined as:

ACH	Counties
Olympic	Clallam, Jefferson, Kitsap
Cascade Pacific	Cowlitz, Grays Harbor, Lewis, Mason, Pacific, Thurston, Wahkiakum
North Sound	Island, San Juan, Skagit, Snohomish, Whatcom
King	King
Pierce	Pierce
SW WA Regional	Clark, Skamania, Klickitat
North Central	Chelan, Douglas, Grant, Okanogan
Greater Columbia	Asotin, Benton, Columbia, Franklin, Garfield, Kittitas, Walla Walla, Whitman, Yakima
Better Health Together	Adams, Ferry, Lincoln, Pend Oreille, Spokane, Stevens

Technical Notes

Limitations: The Behavioral Risk Factor Surveillance System (BRFSS) is an annual cross-sectional survey, which does not inform temporal relationships. It is, for instance, clear from the BRFSS that smoking is associated with not having health insurance, but it cannot be determined whether this is because people without health insurance are more likely to smoke or people who smoke are more likely to not have health insurance. The BRFSS survey design excludes persons from institutions, nursing homes, long-term care facilities, military installations, and correctional institutions. BRFSS also relies on self-reported information which may be subject to systematic misclassification due to various reporting bias, such as social desirability or recall bias. The Washington State BRFSS has also produced relatively low response rates (44% in 2011, 35% in 2012, 31% in 2013, 33% in 2014, 36% in 2015, 39% in 2016 and 40% in 2017), which may contribute to sampling bias. Finally, the percent of the sample drawn from cell phones has steadily increased since 2011, increasing from 5 percent in 2011 to 61 percent in 2017. A larger cell phone sample is good in that it keeps BRFSS current with trends in phone use, but may also contribute to incomparable sampling bias from year-to-year that may not be completely controlled for by weighting.

Trends in this report are assessed by conducting a simple linear regression predicting the annual prevalence with the survey year. Significant ($p<0.05$) β's for survey year are interpreted as the annual percentage point change in the annual prevalence of the risk factor across the time period 2011-2017.

Disparities discussed in this report are presented in detail in the accompanying data dashboard using a variety of measures.

- **95% confidence intervals:** for crude and age-standardized prevalence estimates, the 95% confidence interval is presented. Given the data, if the survey were repeated independently 100 times, the prevalence under consideration would fall within the interval about 95 times. If the confidence intervals of two estimates do not overlap, the estimates are considered to be significantly different from each other. Confidence intervals that overlap require a formal statistical test to assess whether they are significantly different from each other.
- **Relative standard error (RSE):** the RSE is the standard error of the estimate divided by the estimate. The RSE is a common measure of precision. The Washington Department of Health cautions that estimates with an RSE greater than 25% may be unstable. Estimates with large RSE's will have wide confidence intervals and will vary substantially over time. In the accompanying data dashboard, estimates with an RSE >30% are suppressed and estimates with an RSE between 25% and 30% should be used with caution (i.e., they are considered to not be reliable or "NR").
- **Age-standardized percent:** when feasible, estimates have been age-standardized to the 2000 US population using population percentages from Klein and Schoenborn[3] using a process described by the Centers for Disease Control and Prevention that accounts for complex survey design.[4] In addition to specific age groups, age-standardized estimates are not generated for demographic groups that contain empty cells. The age-standardized percent is useful for comparing estimates from populations with very different age distributions, but is not a true measure of burden.

[3] Klein RJ, Schoenborn CA. Age adjustment using the 2000 projected U.S. population. *Healthy People 2010 Stat. Notes.* 2001(20):1-10.
[4] How to generate age-adjusted prevalence rates and means using SAS 9.2 survey procedures. Available at: http://www.cdc.gov/nchs/tutorials/NHANES/NHANESAnalyses/AgeStandardization/Task1b_SAS92.htm. Retrieved October 4, 2016.